

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

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EARL WARREN, Governor

FRANK B. DURKEE, Director of Public Works

A. D. EDMONSTON, State Engineer

R E P O R T O N
W A T E R M A S T E R S E R V I C E
IN
BU R N E E C R E E W A T E R M A S T E R S E R V I C E A R E
SH A S T A C O N T Y, C A L I F O R N I A
1951 SEASON

Sacramento, California
December, 1951

SUBMISSION TO, AND ADOPTION BY
DEPARTMENT OF PUBLIC WORKS

I, L. C. Jopson, Supervising Hydraulic Engineer, Division of Water Resources, Department of Public Works of the State of California, submit this "Report on Watermaster Service in Burney Creek Watermaster Service Area, Shasta County, California, 1951 Season".

/s/ L. C. JOPSON
Supervising Hydraulic Engineer

I, Gordon Zander, Assistant State Engineer, Division of Water Resources, Department of Public Works of the State of California, approve this "Report on Watermaster Service in Burney Creek Watermaster Service Area, Shasta County, California, 1951 Season".

/s/ GORDON ZANDER
Assistant State Engineer

I, A. D. Edmonston, State Engineer and Chief of the Division of Water Resources, Department of Public Works of the State of California, approve and adopt this "Report on Watermaster Service in Burney Creek Watermaster Service Area, Shasta County, California, 1951 Season", as a report of the Department of Public Works.

WITNESS my hand and the seal of the Department of Public Works of the State of California, this 25th day of April, 1952.

DEPARTMENT OF PUBLIC WORKS

By /s/ A. D. EDMONSTON
A. D. Edmonston
State Engineer

SEAL

ORGANIZATION

Frank B. Durkee Director of Public Works
A. D. Edmonston State Engineer
Gordon Zander Assistant State Engineer

This report was prepared under the direction of

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1. HYDROGRAPH OF BURNIEY CREEK - 1951

INTRODUCTION

The Burney Creek Watermaster Service Area was created by order of the Division of Water Resources entered September 11, 1929, to include the water rights on Burney Creek as determined by the decree entered January 30, 1926 in the case of Black vs. Grinnell, No. 5111, Superior Court, Shasta County. A subsequent order, entered March 28, 1942, changed the boundary of the service area to exclude the water rights of Ella P. Braden and John Snooks and certain portions of the NW $\frac{1}{4}$ of Section 20, T 35 N, R 3 E, M.D.B. & M., now within the Town of Burney, Shasta County.

Watermaster service, as provided in Part 4 of Division 2 of the Water Code, extended over the period from May 5 to September 30 in 1951.

O. L. Abbott, deputy watermaster, administered the distribution of water under the supervision of P. E. Stephenson, Senior Hydraulic Engineer.

WATER SUPPLY

Precipitation

The monthly precipitation at Hat Creek Power House No. 1, as compiled from records of the U. S. Weather Bureau is presented in Table 1. The total precipitation for the 1950-51 season was 16.25 inches, or about 93 per cent of the normal precipitation.

Stream Flow

A stream flow measuring station, equipped with an automatic water stage recorder, was maintained on Burney Creek at Haynes Ranch during the period of watermaster service. The station was located below the Haynes and Erickson ditches and above the confluence of Burney Creek with Spring Creek and Canyon Creek. The discharge at the gaging station plus the amounts being diverted by the Haynes and Erickson ditches gives the amount of water available for distribution except at the beginning of the season when additional water is available from these tributaries.

The record of daily discharge in cubic feet per second of Burney Creek at Haynes Ranch for the period from May 11 to September 18, 1951 is given in Table 2.

A graphic comparison of the available water supply at the gaging station and the water requirements is shown graphically in Plate 1.

DISTRIBUTION OF WATER

Distribution during the 1951 season followed the methods and practices initiated in past seasons with little or no modification. All diversion facilities on the stream system were in operation throughout the period of watermaster service excepting the Cayton Ditch which has been abandoned. The water formerly carried in that ditch is now delivered to the Eling Ranch through the Eling Lower Ditch.

As in past years, the various water users expressed their preference for a continuous flow and distribution was made on that basis. Until June 20 the available water supply was sufficient to supply full allotments. After

June 2 the available water supply gradually decreased until September 1 when about 45 per cent of first priority allotments was available. Thereafter until the end of the season the flow remained nearly constant.

A summary of the distribution of water during the 1951 irrigation season is presented in the following tabulation:

SUMMARY OF DISTRIBUTION ON BURNEY CREEK

Dates	Average Discharge Burney Creek at Haynes Ranch**	Per Cent of Allotment*	
		First Priority	Second Priority
May	65.2	100	100
6/1 - 6/20	17.4	100	0
6/20 - 6/30	12.6	80	0
July	11.6	68	0
August	10.5	50	0
September	10.5	45	0

* Percentages shown are the per cent of full allotments delivered as measured at the points of diversion from Burney Creek.

** Does not include 6.83 c.f.s. diverted by the Haynes and Erickson ditches above the gaging station.

CHANGE IN OWNERSHIP OF LANDS AND WATER RIGHTS

The change in ownership of lands and water rights which has occurred subsequent to filing "Statement for Burney Creek Watermaster Service Area, County of Shasta, State of California, for 1951", and which shall be included in statement for the watermaster service area for 1952, is as follows:

Tract No.	Name of Water Right Owner Appearing in 1951 Statement	Name of Water Right Owner to Appear in 1952 Statement	Amount of Water c.f.s.
1-1	John F. Taylor and Helen Taylor	Charles W. Beeler and Betty Beeler	5.85

TABLE 1

PRECIPITATION - HAT CREEK POWER HOUSE NO. 1

SHASTA COUNTY, CALIFORNIA
 1950-1951
 Elevation 3,015 feet

Month	Normal Precipitation Inches	1950-51 Precipitation Inches	Per Cent of Normal
October	1.24	2.90	234
November	1.86	1.82	97
December	2.62	2.88	110
January	2.56	3.42	133
February	3.08	2.44	79
March	1.83	0.52	28
April	1.55	0.85	54
May	1.22	0.80	66
June	0.77	0.01	1.3
July	0.13	0.00	0
August	0.12	0.59	499
September	0.40	0.02	5
Total	17.38	16.25	935

Data from records of U. S. Weather Bureau.

TABLE 2

Daily Discharge in Cubic Feet Per Second

BURNEY CREEK AT HAYNES RANCH
May 11 to September 18, 1951

Day	May	June	July	August	September
1		22	12.5	10.5	10.5
2	NO	21	12.5	10.5	10.5
3		20	12.0	10.5	10.5
4		20	12.0	10.5	10.5
5		19	12.0	10.5	10.5
6		18	12.0	10.5	10.5
7		18	12.0	10.5	10.5
8	RECORD	17	12.5	10.5	10.5
9		17	12.5	10.5	10.5
10		17	12.5	11.0	10.5
11	101	17	13.0	10.5	10.5
12	82	17	13.0	10.5	10.5
13	73	17	13.5	10.5	10.5
14	71	16.5	13.5	10.5	10.5
15	62	16.5	13.0	10.5	10.5
16	60	16.0	13.0	10.5	10.5
17	60	15.0	12.5	10.5	11.0
18	59	14.5	12.5	10.5	11.0
19	59	14.5	12.0	10.5	
20	56	14.0	12.0	10.5	
21	52	14.0	11.5	10.5	
22	47	13.5	11.0	10.5	
23	42	13.0	10.5	10.5	NO
24	37	12.5	10.5	10.5	
25	32	12.0	10.5	10.5	
26	31	12.0	10.5	10.5	
27	30	12.0	10.5	10.5	
28	27	12.5	10.5	10.5	
29	25	12.5	10.5	10.5	RECORD
30	24	12.5	10.5	10.5	
31	23		10.5	10.5	
Total Sec.					
Ft. Days	*1,053	474	368	326	**190
Mean					
Sec. Ft.	50.1	15.8	11.9	10.5	10.5
Total					
Ac. Ft.	*2,085	938	729	645	**376

* 21 day period
** 18 day period

Total runoff for 131 day period - 4,773 acre-feet.

APRIL 5 10 15 20 25 MAY 5 10 15 20 25 JUNE 5 10 15 20 25 JULY 5 10 15 20 25 AUGUST 5 10 15 20 25 SEPTEMBER 5 10 15 20 25

HYDROGRAPH
OF
BURNLEY CREEK

150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
CUBIC FEET PER SECOND

Burnley Creek at Haynes Ranch

Total allotments 7

Total 1st priority allotments 2

5 10 15 20 25 5 10 15 20 25 5 10 15 20 25 5 10 15 20 25 5 10 15 20 25 5 10 15 20 25
APRIL MAY JUNE JULY AUGUST SEPTEMBER

